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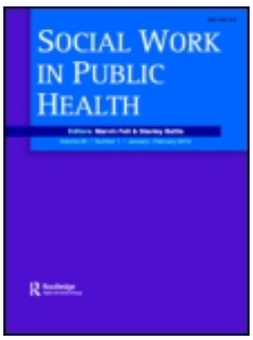

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Intimate Partner Violence and Communication of HIV Diagnosis in Rakai, Uganda

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Individuals who communicate their HIV diagnosis to sexual partners may be at increased risk of intimate partner violence (IPV). The authors examined past year self-reported IPV associated with communication of HIV diagnosis and other factors, in a sample of 679 sexually active; HIV-positive individuals age 18 to 49, who received HIV results and posttest counselling 12 months or more prior to the survey in Rakai, Uganda, using log-binomial multivariable regression. The rates of verbal and physical abuse among married individuals were significantly higher compared to unmarried persons, respectively. Physical abuse was significantly higher among women compared to men. IPV was not significantly associated with communication of HIV diagnosis. Interventions to prevent IPV among married HIV-positive individuals particularly women, at the community level, are needed.

Keywords: Intimate partner violence, communication of HIV diagnosis, physical abuse, verbal abuse

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INTRODUCTION

Intimate partner violence (IPV) is physical, sexual, or psychological/emotional abuse that occurs between two people in a close relationship (Centers for Disease Control and Prevention [CDC], 2011; Ezechi et al., 2009) and includes current and former partners including boyfriend or girlfriend relationships (Coker et al., 2002; Ezechi et al., 2009; Saltzman, Fanslow, McMahon, & Shelley, 2002). IPV is a phenomenon of epidemic proportions prevalent in many communities and cultures. Men and women perpetrate violence against their partners (Gelaye, Lam, Cripe, Sanchez, & Williams, 2010; Muñoz-Rivas, Graña, O'Leary, & González, 2007; Williams, Ghandour, & Kub, 2008). However, globally, rates of reported IPV for men and women range between 5% and 50% (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; Heise, Pitanguy, & Germain, 1994; Maman et al., 2003; Population Reports, 1999; Van der Straten et al., 1998). In Uganda, the prevalence of reported IPV for men and women ranges between 14% and 54% (Karamagi, Tumwine, Tylleskar, & Heggenhougen, 2006; M. A. Koenig et al., 2003; Uganda Bureau of Statistics (UBOS) and Macro International Inc., 2007; Zablotska et al., 2009).

In particular, IPV prevalence for men with regard to educational attainment is not affected by one's level. Men with no education and those with primary or secondary education report similar prevalence rates of IPV in as far as being perpetrators and victims (UBOS and Macro International Inc., 2007). Yet for women, the situation is different. Women with no education are the most perpetrators and victims of IPV compared to those with primary or secondary education (UBOS and Macro International Inc., 2007). IPV numbers may be underestimated as individuals hesitate to report, for fear of social stigma (Agarwal & Panda, 2007).

In general, reported rates of IPV are lower among men compared to women in Uganda (Karamagi et al., 2006; UBOS and Macro International Inc., 2007). Only about 18% of men report having experienced any form of IPV from their partners compared to 33% for women in the past 12 months (UBOS and Macro International Inc., 2007). This means that women are at a greater risk of experiencing all forms of IPV (Flynn & Graham, 2010; Hindin, 2003; Karamagi et al., 2006; Reisenhofer & Seibold, 2007), and the frequency of IPV is more among married women compared to single ones for individuals age 15 to 49 (UBOS and Macro International Inc., 2007).

With regard to HIV infection, average HIV prevalence among individuals age 15 to 49 in Uganda, according to available published data, is about 7.3%, being higher at 8.3% in women compared to 6.1% in men (Uganda Ministry of Health and ICF International, 2012). In Rakai district, according to available data, HIV prevalence is about 11%, with an incidence of 1.2/100 to 1.5/100 person-years (Gray et al., 2003; Kim & Miller, 2009). On the other hand, HIV prevalence is also related to marital status with about 7.4% in current marital relationships compared to about 3% in the never- married persons among individuals age 15 to 49 (Uganda Ministry of Health and ICF International, 2012). Besides, HIV- positive individuals are reported to experience more IPV compared to HIV- negative persons (Maman, Campbell, Sweat, & Gielen, 2000; Van der Straten et al., 1998; World Health Organization [WHO], 2004; Zierler, Witbeck, & Mayer, 1996). In East Africa, there is a reported more than twofold increase in IPV for HIV-positive women compared to HIV-negative women (Emusu et al., 2009; Fonck, Els, Kidula, Ndinya-Achola, & Temmerman, 2005; M. A. Koenig et al., 2003; Maman et al., 2002; Zablotska et al., 2009).

In the context of communication of HIV diagnosis to sexual partners and IPV, empirically documented evidence is conflicting. Some studies report that communication of HIV diagnosis to sexual partners is associated with increased social and financial support, sympathy, acceptance, less anxiety, fewer symptoms of depression and kindness, and less or no IPV (Keogh, Allen, Almedal, & Temahagili, 1994; King et al., 2008; Maman et al., 2003; WHO, 2003). Conclusions from other studies have, on the other hand, generally indicated that persons who communicate their HIV diagnosis to sexual partners are at a more increased risk of IPV (Emusu et al., 2009; Gielen, Faden,

O'Campo, & Eke, 1997; Gielen, McDonnell, Burke, & O'Campo, 2000; Maman, Mbwambo, Hogan, Kilonzo, & Sweat, 2001; Rothenberg & Paskey, 1995).

Consequently, stigma, abandonment, depression, anxiety-related problems, post-traumatic stress disorders, antisocial behaviors, and repeated suicidal thoughts and behaviors have been acknowledged as implications of the HIV diagnosis communication–IPV nexus (Bergen, 1996; Coker et al., 2002; Diop-Sidibe, Campbell, & Becker, 2006; Gielen et al., 2000; Roberts, Klein, & Fisher, 2003; WHO, 2003; Ystgaard, Hestetun, Loeb, & Mehlum, 2004; Zierler et al., 2000) in the community (Agarwal & Panda, 2007; CDC, 2011; Population Reports, 1999). These negative outcomes stemming from the IPV–HIV diagnosis communication connection increase health and social care costs and demands on the scanty resources in families and communities (Little & Kantor, 2002; Tomison, 2000) particularly in sub-Saharan African situations (Maman et al., 2001; WHO, 2003).

Communication of HIV diagnosis (disclosure of HIV status) to sexual partners and reduction of IPV (gender-based violence) are two core behavioral interventions targeted by the Ugandan Government for HIV sero-positive persons in the national HIV prevention strategy 2011 to 2015 (Uganda AIDS Commission, 2011). However, data assessing the association of IPV with communication of HIV diagnosis, marital status, age, and gender and education level in sexually active HIV-positive individuals who already know their HIV infection status in a community-based setting are limited. To address these gaps, we examined the association of past year experiences of IPV with communication of HIV diagnosis, gender, marital status, age, and education level in an HIV positive sample in Rakai district, Uganda.

METHOD

Participants and Procedures

Participants for this study were retrospectively identified from the 2007 to 2008 survey of an ongoing Rakai Community Cohort Study (RCCS) using unique alphanumeric computer generated identification numbers (unique identifiers). The details of RCCS have been reported elsewhere (Nakigozi et al., 2011; Reynolds et al., 2011). However, in brief, RCCS is a prospective rural population-based cohort, which collects annual surveillance data to document HIV and sexually transmitted diseases (STDs) prevalence and incidence, and associated risk factors from approximately 14,000 men and women, age 15 to 49, residing in 50 communities in rural Rakai District, found in southwestern Uganda about 160 kilometers from Kampala capital city. We retrospectively identified an eligible sample of 679 (female = 454, male = 225) heterosexual individuals age 18 to 49 who were HIV infected, sexually active, and reported to be in a sexual relationship, with the same sexual partner (s), within a time frame of at least 12 months. Also, eligible participants had individually received HIV results and posttest counselling from the Rakai Health Sciences Programme (RHSP) counselling department, where they learned their HIV infection status, at least 12 months preceding the survey.

Participants were invited to a central hub in the participants' respective villages and/or trading centers where same-sex interviewers conducted a one-to-one private and confidential interview, to obtain survey data on sociodemographic characteristics such as age, education level, and marital status; and communication of HIV diagnosis to one's sexual partner, and experience of IPV. On the other hand, participants were not asked about sexual victimization. Also, participants were not asked about the order of occurrence of IPV and HIV diagnosis communication.

Communication of HIV diagnosis was defined as having taken place if participants reported that they had informed sexual partner(s) about their HIV infection status. *IPV* was defined as verbal/emotional abuse if research participants reported that they were verbally abused, shouted at, or barked at by their

sexual partners in the past 12 months. And *IPV* was defined as physical abuse if participants reported that they were pushed, slapped, kicked, punched with a fist or with something that could hurt them, or were forcefully held on the ground by their sexual partners in the past 12 months preceding the survey.

Ethical Considerations

Participants were informed of study procedures, benefits, and risks and provided written informed consent for interviews. Participants were also referred to the RHSP's HIV care and treatment program, funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and were offered free condoms. The study was approved by the Uganda National Council of Science and Technology, the Science and Ethics Committee of the Uganda Virus Research Institute, Entebbe, Uganda and the Committee for Human Research at the Johns Hopkins University, Bloomberg School of Public Health Baltimore, USA.

Statistical Analysis

In this analysis, we first compared communication of HIV diagnosis to sexual partners with demographic characteristics (gender, age, education level, and marital status) using the chi-squared test. Then, IPV in relation to communication of HIV diagnosis was examined using the log-binomial multivariable regression model. Given the design of the study and the dichotomous nature of IPV (Lee, Tan, & Chia, 2009); the log-binomial multivariable regression model to estimate adjusted prevalence risk ratios (APRR) and the 95% confidence intervals (CI) associated with communication of HIV diagnosis to one's sexual partner was preferred (Lee, 1995; Lee & Chia, 1993; Stromberg, 1994; Zocchetti, Consonni, & Bertazzi, 1995). Possible confounding variables (gender, marital status, age, and education level) were included in the multivariable regression models. Statistical analyses were performed using Stata software version 11.0 (StataCorp, 2009).

RESULTS

This study retrospectively identified a total of 679 eligible HIV-infected heterosexual individuals. However, with regard to comparing HIV diagnosis communication to sexual partners with

TABLE 1
HIV Diagnosis Communication by Participant Characteristics ($N = 620$)

	Communicated HIV Diagnosis to Sexual Partner		
Characteristic	*Yes (%)*	*No (%)*	*p Value*
Gender			
Female	147/416 (35.3)	269/416 (64.7)	
Male	87/204 (42.6)	117/204 (57.4)	0.08
Age			
18–34	139/380 (36.6)	241/380 (63.4)	
35–49	95/240 (39.6)	145/240 (60.4)	0.45
Education level			
Primary/lower	178/467 (38.1)	289/467 (61.9)	
Postprimary	56/153 (36.6)	97/153 (63.4)	0.74
Married/cohabiting ($n = 572$)			
Yes	172/390 (44.1)	218/390 (55.9)	
No	51/182 (28.0)	131/182 (72.0)	$<.001$

TABLE 2
Crude and Adjusted Prevalence Risk Ratios (PRR) of Verbal Abuse by Participant Characteristics and Communication of HIV diagnosis ($N = 679$)

	Verbal Abuse			
Characteristic	*Proportion (%)*	*Crude PRR 95% CI*	*Adjusted PRR 95% CI*	*p Value*
Gender				
Male	65/225 (28.9)	1.0 (reference)	1.0 (reference)	
Female	108/454 (23.8)	0.8 [0.6, 1.1]	1.0 [0.7, 1.3]	0.93
Age				
18–34	107/413 (25.9)	1.0 (reference)	1.0 (reference)	
35–49	66/266 (24.8)	1.0 (0.8, 1.4)	1.1 (0.8, 1.5)	0.55
Education level				
Primary or lower	132/516 (25.6)	1.0 (reference)	1.0 (reference)	
Post primary	41/163 (25.2)	1.0 [0.7, 1.3]	0.9 [0.7, 1.3]	0.75
Married or cohabiting ($n = 629$)				
No	28/191 (14.7)	1.0 (reference)	1.0 (reference)	
Yes	137/438 (31.3)	2.1 [1.5, 3.1]	2.3 [1.5, 3.4]	$<.001$
Communicated HIV diagnosis				
Yes	56/234 (23.9)	1.0 (reference)	1.0 (reference)	
No	94/386 (24.4)	1.0 [0.7, 1.3]	0.9 [0.7, 1.2]	0.35

CI = confidence interval.

demographic characteristics, 620 records were found to have complete data. And as shown in Table 1, though not statistically significant, communication of HIV diagnosis was more frequent among men (42.6%) compared to women (35.3%, $p = .08$). However, with regard to marital status, married individuals (44.1%) were significantly more likely to communicate their HIV diagnosis to sexual

TABLE 3
Crude and Adjusted Prevalence Risk Ratios (PRR) of Physical Abuse by Participant Characteristics and Communication of HIV diagnosis ($N = 679$)

	Physical Abuse			
	Characteristic Proportion (%)	*Crude PRR 95% CI*	*Adjusted PRR 95% CI*	*p Value*
Gender				
Male	22/225 (9.8)	1.0. (reference)	1.0 (reference)	
Female	80/454 (17.6)	1.8 [1.2, 2.8]	2.0 [1.2, 3.2]	0.01
Age				
18–34	69/413 (16.7)	1.0 (reference)	1.0 (reference)	
35–49	33/266 (12.4)	1.4 [0.9, 2.0]	1.3 [0.8, 2.0]	0.28
Education level				
Primary or lower	83/516 (16.1)	1.0 (reference)	.0 (reference)	
Postprimary	19/163 (11.7)	0.7 (0.5, 1.2)	0.7 [0.4, 1.1]	0.15
Married or cohabiting ($n = 629$)				
No	22/191 (11.5)	1.0 (reference)	1.0 (reference)	
Yes	76/438 (17.4)	1.5 [1.0, 2.4]	1.7 [1.0, 2.6]	0.04
Communicated HIV diagnosis				
No	54/386 (14.0)	1.0 (reference)	1.0 (reference)	
Yes	76/234 (32.5)	1.1 [0.8, 1.6]	1.1 [0.7, 1.6]	0.71

CI = confidence interval.

partners than unmarried persons (28.0%, $p < .001$). Age and education level were not significantly associated with communication of HIV diagnosis.

Table 2 shows the rates of verbal abuse. Married individuals were more likely to report verbal abuse (emotional violence) than unmarried persons in the adjusted model (APPR = 2.3 (95% CI [1.5, 3.4]). Communication of HIV diagnosis was not significantly associated with verbal abuse. There were also no significant associations with regard to verbal abuse and age, education level or gender.

As shown in Table 3, married individuals were significantly more likely than unmarried persons to report physical abuse (APRR = 1.7, 95% CI [1.0, 2.6]); and women were significantly more likely than men to report physical abuse in the adjusted model (APRR = 2.0, 95% CI [1.2, 3.2]). Communication of HIV diagnosis was not significantly associated with physical abuse even though individuals who communicated their HIV diagnosis reported more physical abuse (32.5%) compared to those who did not communicate their HIV status to sexual partners (14.0%). Age and education level were not significantly associated with physical abuse.

DISCUSSION

We found that communication of HIV diagnosis was significantly higher among married persons than unmarried individuals. The high rate of communication of HIV diagnosis among married individuals is comparable to earlier studies (Bairan et al., 2007; Kimberly, Serovich, & Greene, 1995; Trieu, Modeste, Marshak, Males, & Bratton, 2010) and suggests the importance of the emotional bond and feelings of trust and confidence in married relationships as a factor influencing sharing of an HIV diagnosis with sexual partners. The high rate of communication of HIV diagnosis to sexual partners among married persons also suggests the difficulty in seeking HIV care and treatment and the managing of HIV medications (antiretroviral therapy adherence) and related processes without communication of HIV diagnosis given the proximity of most married relationships. Additionally, this finding adds credence to the growing body of research that shows married individuals as being more likely to share their HIV diagnosis to sexual partners compared to unmarried persons (Ciccarone et al., 2003; Kalichman & Nachimson, 1999; Sullivan, 2009) because married individuals are perceived as understanding, compassionate, trustworthy, and supportive from whom a favorable response is predicted (Kimberly et al., 1995; Semple, Patterson, Shaw, Pedlow, & Grant, 1999; Stein et al., 1998; Sullivan, 2009). Our results are also comparable to findings from an earlier Ugandan study in which positive outcomes such as initiation of condoms use, increased care seeking behaviors for partner and self, relief from worry, and improved motivation to plan for the future among married persons were associated with HIV sero-status disclosure than with unmarried individuals (King et al., 2008).

On the other hand, married participants reported more frequent verbal and physical abuse than unmarried persons. These results are consistent with studies in East Africa and India in which marriage was also associated with IPV (Prabhu et al., 2011; Silverman, Decker, Saggurti, Balaiah, & Raj, 2008; UBOS and Macro International Inc., 2007; Van der Straten et al., 1998) and supports the suggestion that IPV and HIV infection coexist within similar environmental and behavioral risk contexts (L. J. Koenig & Moore, 2000) among married individuals. Besides, this finding may be due to the fact that married individuals spend more time with each other and, thus, have more opportunity to commit acts of emotional and physical abuse. However, this contradicts with suggestions that romanticized marriage is a safe haven and a frequent source of happiness in an often harsh world (Berscheid & Reis, 1998; Marcus & Swett, 2003).

Conversely, neither verbal abuse nor physical abuse was statistically significant with regard to communication of HIV diagnosis to sexual partners. This contrasts earlier findings from studies in sub-Saharan Africa and the United States in which reported IPV was associated with communication of HIV diagnosis (Emusu et al., 2009; Ezechi et al., 2009; Gielen et al., 1997; Gielen et al., 2000; Maman et al.,

2001; Medley, Garcia-Moreno, McGill, & Maman, 2004; WHO, 2003; Zierler et al., 2000). Probably, this may be due to the fact that previous studies in which IPV was associated with communication of HIV diagnosis were conducted in specialized urban antenatal clinics, STD clinics, or urban voluntary counselling and HIV testing (VCT) centers. This study is community based and was conducted in a rural setting with an exclusively HIV-positive sample in which violence may be differently associated.

On the other hand, women were more likely than men to report physical abuse. This finding is consistent with earlier analyses from sub-Saharan Africa on gender inequality and IPV among women (Ezechi et al., 2009; Hindin, 2003; Jewkes et al., 2006; Karamagi et al., 2006; M. A. Koenig et al., 2003; Maman et al., 2002; McCloskey, Williams, & Larsen, 2005) and supports arguments by feminist/sociocultural theorists that aggression is the product of socially sanctioned domination and control of women by men and IPV is used as a form of power and control (Bell & Naugle, 2008; Corvo & deLara, 2010; Corvo & Johnson, 2003; Dutton, 1995; Manfrin-Ledet & Porche, 2003). Also, this finding has important implications regarding women's discussions about initiation of condoms use, the use of contraception with sexual partners to reduce the number of unintended pregnancies, and subsequently HIV-infected women's uptake and optimal adherence to prevention of mother-to-child transmission of HIV (PMTCT), support, care and treatment programs. Thus, programs that promote sexual and reproductive health issues among married HIV-infected women need to first assess the risk of IPV.

LIMITATIONS

In this cross-sectional analysis, we could not determine whether reported IPV occurred before or after communication of HIV diagnosis. We were also not able to measure the frequency of IPV in the past year. The past 12 months was a long period and thus, in our view, affected recall memory. In addition, we relied on self-reported data that is prone to social desirability and recall biases. In light of these limitations, we propose a longitudinal study to document the frequency and temporal occurrence of IPV and communication of HIV diagnosis. Also, this study was quantitative in nature. We could not obtain a more holistic view of the world of individuals experiencing IPV. An in-depth exploration of lived experiences of IPV and communication of HIV diagnosis through a qualitative inquiry is needed. Nevertheless, our findings showcase important implications for counselling programs that target married HIV-positive individuals, particularly women.

CONCLUSIONS

In this study, IPV is not significantly associated with communication of an HIV diagnosis. However, verbal and physical forms of IPV are significantly associated with being in a marital relationship. Women are more likely to report physical abuse compared to men. Interventions to prevent IPV among married HIV-positive individuals especially at community level are needed.

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